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**From:** Galloway, Rick (DNREC) [Rick.Galloway@delaware.gov]  
**Sent:** 7/22/2020 8:56:08 PM  
**To:** O'Loughlin, Connor [oloughlin.connor@epa.gov]; Taylor, Daniel [taylor.daniel@epa.gov]; Nevshahirlian, Stepan [Nevshahirlian.Stepan@epa.gov]  
**CC:** Bryson, Amy E. (DNREC) [Amy.Bryson@delaware.gov]  
**Subject:** FW: [Ex. 9 Wells] Domestic Well in Blades  
**Attachments:** ATT00001.txt; [Ex. 9 Wells] GWS13\_well\_completion\_report.pdf; [Ex. 9 Wells] GWS13\_well\_permit\_application.pdf; [Ex. 9 Wells] GWD13\_well\_completion\_report.pdf; [Ex. 9 Wells] GWD13\_well\_permit\_application.pdf  
  
**Flag:** Follow up

Dan, Stepan and Connor,

I wanted to make you aware that [Ex. 6 Personal Privacy (PP)] was planning to install a well on his property [Ex. 6 Personal Privacy (PP)] (replacement reason: "low yield"), Blades, DE. I talked to our Well Permitting folks and offered, out of an abundance of caution, to provide him with filters used for PFAS contamination on his "replacement" well prior to any EPA testing for the RI. Then I found out that he wasn't planning on installing the well due to cost. [Ex. 6 Personal Privacy (PP)] called me and complained that his water had an issue with black water in the bathroom fixtures (see emails below). He said that it started when test wells were installed [Ex. 6 Personal Privacy (PP) / Ex. 9 - Wells]. It appears that EPA installed the wells that he identified as test wells. I am planning on calling him and explaining that the source of the black water is likely manganese and also noting that EPA installed the wells but that they are monitoring wells and not pumping wells. Since the black staining is not related to contamination and the filters would not help with the toilet or shower water color, I am not planning on providing filters. I just wanted to give you a heads up if he decides to contact EPA. I will let you know how the call goes.

I left a message for him today to call me back.

Thanks.

Rick Galloway, P.G.  
Hydrologist, Project Manager  
Remediation Section  
Dept. Natural Resources and Environmental Control  
391 Lukens Drive  
New Castle 19720-2774

Ph- 302-395-2614  
Fax- 302-395-2601

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**From:** Galloway, Rick (DNREC)  
**Sent:** Wednesday, July 22, 2020 9:10 AM  
**To:** amy bryson (Amy.Bryson@delaware.gov) <Amy.Bryson@delaware.gov>  
**Subject:** FW: [Ex. 9 Wells] Domestic Well in Blades

Amy,

It looks like the wells that "increased" the issue with [Ex. 6 Personal Privacy (PP)] were installed by EPA as part of the SI. I am going to talk to Josh a little later this morning to clarify things but if I mention that EPA installed the wells to [Ex. 6 Personal Privacy (PP)] then he could be calling EPA. I will give you a call later after I talk to Josh to discuss.

Rick Galloway, P.G.

Hydrologist, Project Manager  
Remediation Section  
Dept. Natural Resources and Environmental Control  
391 Lukens Drive  
New Castle 19720-2774

Ph- 302-395-2614  
Fax- 302-395-2601

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**From:** Kasper, Joshua W. (DNREC)  
**Sent:** Tuesday, July 21, 2020 8:47 PM  
**To:** Galloway, Rick (DNREC) <[Rick.Galloway@delaware.gov](mailto:Rick.Galloway@delaware.gov)>  
**Subject:** RE: [Ex. 9 Wells] Domestic Well in Blades

Hi Rick

It looks like a well nest, GWS-13 (263664) and GWD-13 (263665), was installed [Ex. 6 Personal Privacy (PP)] in 2018. See attached. Perhaps these are the wells he's referring to. I recall seeing these and others mentioned in Weston's report, but I could be mistaken.

It looks like another well nest, GWS-10 and GWD-10, was installed farther to the northeast along [Ex. 6 Personal Privacy (PP)]. The DNREC IDs for those are 263667 and 263668.

And sorry if I misspoke re the filters. I assumed that they might be available considering the potential for PFAS, which is what I thought we were dealing with for the proposed well. It was my understanding that we didn't know the depth of his existing well prior to me speaking with him, so we didn't know if the proposed well would be deeper, shallower, or at the same depth. This is totally your call, but I just wanted you to know my rationale for referring him to you. I'm glad he followed up with you to get it straight from the source.

Thanks and take care

Josh

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**From:** Galloway, Rick (DNREC) <[Rick.Galloway@delaware.gov](mailto:Rick.Galloway@delaware.gov)>  
**Sent:** Tuesday, July 21, 2020 4:58 PM  
**To:** Kasper, Joshua W. (DNREC) <[Joshua.Kasper@delaware.gov](mailto:Joshua.Kasper@delaware.gov)>  
**Subject:** RE: [Ex. 9 Wells] Domestic Well in Blades

Josh,

I just spoke with [Ex. 6 Personal Privacy (PP)]. He said that his water has had a little bit of black to it but when a "test" well was installed [Ex. 6 Personal Privacy (PP) / Ex. 9 - Wells], it got a lot worse. I am trying to figure what well he may be referring to. I asked him in the address and he didn't know. Do you have any well requests from the public or EPA near [Ex. 6 Personal Privacy (PP)] property in the last 1-2 years? I told him I would get back to him in a couple days. Thanks.

[Ex. 6 Personal Privacy (PP)] requested to get the filters to treat the water. As an aside, DNREC-RS has only been providing filters to people with elevated PFAS or in this case where we were not sure if he installed a deeper well and might encounter PFAS. It seems like it could be related to manganese and not to PFAS or to chromium. DNREC-RS is not planning on providing filters at this point for his current well water. If the well was installed by EPA then maybe they would be willing to do something.

Rick Galloway, P.G.

Hydrologist, Project Manager  
Remediation Section  
Dept. Natural Resources and Environmental Control  
391 Lukens Drive  
New Castle 19720-2774

Ph- 302-395-2614  
Fax- 302-395-2601

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**From:** Kasper, Joshua W. (DNREC)  
**Sent:** Friday, July 17, 2020 12:47 PM  
**To:** Pongratz, Alan E. (DNREC) <Alan.Pongratz@delaware.gov>; Rios, Ricardo (DNREC) <Ricardo.Rios@delaware.gov>; Moore, David L. (DNREC) <David.Moore@delaware.gov>; White, David (DNREC) <David.W.White@delaware.gov>  
**Cc:** Silves, Sarah A (DNREC) <Sarah.Silves@delaware.gov>; Whitley, Kayla (DNREC) <Kayla.Whitley@delaware.gov>; Grabowski, Matthew T. (DNREC) <Matthew.Grabowski@delaware.gov>; Galloway, Rick (DNREC) <Rick.Galloway@delaware.gov>  
**Subject:** Re: Ex. 9 Wells Domestic Well in Blades

I just spoke with both Mel and Ex. 6 Personal Privacy (PP) about condition #95. Ex. 6 Personal Privacy (PP) reported that he cannot afford a new well. He reported that his current well is 35-ft deep, and that he has problems with black staining on his bathroom fixtures. I told him that the filtration units might still be made available to him regardless of what he does with the proposed well, and that he may also be eligible for future testing by DNREC and (or) EPA. Rick, I provided your number in case he wants to reach out to you to coordinate sampling etc.

Josh

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**From:** Pongratz, Alan E. (DNREC) <Alan.Pongratz@delaware.gov>  
**Sent:** Friday, July 17, 2020 12:10 PM  
**To:** Kasper, Joshua W. (DNREC) <Joshua.Kasper@delaware.gov>; Rios, Ricardo (DNREC) <Ricardo.Rios@delaware.gov>; Moore, David L. (DNREC) <David.Moore@delaware.gov>; White, David (DNREC) <David.W.White@delaware.gov>  
**Cc:** Silves, Sarah A (DNREC) <Sarah.Silves@delaware.gov>; Whitley, Kayla (DNREC) <Kayla.Whitley@delaware.gov>; Grabowski, Matthew T. (DNREC) <Matthew.Grabowski@delaware.gov>; Galloway, Rick (DNREC) <Rick.Galloway@delaware.gov>  
**Subject:** RE: Ex. 9 Wells Domestic Well in Blades

Hey Josh,

I would suggest to reaching out to Mel's Well for contact information for Ex. 6 Personal Privacy (PP)

Mel's Wells email is;

[melvyn.miller@yahoo.com](mailto:melvyn.miller@yahoo.com)

Or you can reach out to him at 302-393-9017.

I would prefer you have explained your review in detail, before we apply the condition of concern, to prevent an oversight.

Alan Pongratz

Environmental Control Supervisor

302-739-9944

[alan.pongratz@delaware.gov](mailto:alan.pongratz@delaware.gov)



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**From:** Kasper, Joshua W. (DNREC) <[Joshua.Kasper@delaware.gov](mailto:Joshua.Kasper@delaware.gov)>

**Sent:** Friday, July 17, 2020 11:20 AM

**To:** Rios, Ricardo (DNREC) <[Ricardo.Rios@delaware.gov](mailto:Ricardo.Rios@delaware.gov)>; Moore, David L. (DNREC) <[David.Moore@delaware.gov](mailto:David.Moore@delaware.gov)>; White, David (DNREC) <[David.W.White@delaware.gov](mailto:David.W.White@delaware.gov)>

**Cc:** Pongratz, Alan E. (DNREC) <[Alan.Pongratz@delaware.gov](mailto:Alan.Pongratz@delaware.gov)>; Silves, Sarah A (DNREC) <[Sarah.Silves@delaware.gov](mailto:Sarah.Silves@delaware.gov)>; Whitley, Kayla (DNREC) <[Kayla.Whitley@delaware.gov](mailto:Kayla.Whitley@delaware.gov)>; Grabowski, Matthew T. (DNREC) <[Matthew.Grabowski@delaware.gov](mailto:Matthew.Grabowski@delaware.gov)>; Galloway, Rick (DNREC) <[Rick.Galloway@delaware.gov](mailto:Rick.Galloway@delaware.gov)>

**Subject:** RE: Ex. 9 Wells - Domestic Well in Blades

I was planning to reach out to Ex. 6 Personal Privacy (PP) to discuss condition #95, but I just noticed that neither a telephone number nor an e-mail address were provided on the permit application. If someone could please relay this condition to Mel's Wells it would be greatly appreciated.

Thanks

Josh

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**From:** Kasper, Joshua W. (DNREC)

**Sent:** Friday, July 17, 2020 11:12 AM

**To:** Rios, Ricardo (DNREC) <[Ricardo.Rios@delaware.gov](mailto:Ricardo.Rios@delaware.gov)>; Moore, David L. (DNREC) <[David.Moore@delaware.gov](mailto:David.Moore@delaware.gov)>; White, David (DNREC) <[David.W.White@delaware.gov](mailto:David.W.White@delaware.gov)>

**Cc:** Pongratz, Alan E. (DNREC) <[Alan.Pongratz@delaware.gov](mailto:Alan.Pongratz@delaware.gov)>; Silves, Sarah A (DNREC) <[Sarah.Silves@delaware.gov](mailto:Sarah.Silves@delaware.gov)>; Whitley, Kayla (DNREC) <[Kayla.Whitley@delaware.gov](mailto:Kayla.Whitley@delaware.gov)>; Grabowski, Matthew T. (DNREC) <[Matthew.Grabowski@delaware.gov](mailto:Matthew.Grabowski@delaware.gov)>; Galloway, Rick (DNREC) <[Rick.Galloway@delaware.gov](mailto:Rick.Galloway@delaware.gov)>

**Subject:** Ex. 9 Wells - Domestic Well in Blades

A hydrogeologic review of the above-referenced well permit application was completed in collaboration with Rick Galloway of the DNREC's Remediation Section (DNREC-RS). Based on this joint review, the following permit condition is recommended:

*Site-specific condition #95: The proposed domestic well is located in an area of Blades, DE, where per- and polyfluoroalkyl substances (PFAS), namely perfluorooctanoic acid (PFOA) and perfluorooctanesulfonate (PFOS), have been detected in groundwater from the surficial aquifer at concentrations exceeding the U.S. EPA Health Advisory of 70 parts per trillion (ppt). Since the groundwater conditions of the new well are unknown and the well is close to PFAS-impacted wells, out of an abundance of caution the DNREC Remediation Section (DNREC-RS) has made 2 Aquasana filter systems available to the well owner after the new well is installed. One can be placed on the kitchen sink and one on the bathroom sink. These filters will provide approximately 6 months of protection. These systems can be picked up in the Blades Town Office the week of 7/20/20. EPA or DNREC will likely be testing private wells in your area within the next 6 months for PFAS. Please consider providing access to test your water for PFAS. Please contact Rick Galloway of the DNREC-RS at [rick.galloway@delaware.gov](mailto:rick.galloway@delaware.gov) or (302) 395-2614 with any questions.*

Application **Ex. 9 Wells** is for a replacement domestic well at **Ex. 6 Personal Privacy (PP)** replacement reason: "low yield"). The proposed screen interval (60 to 70 ft bls) indicates that the well will be completed in the surficial aquifer. The proposed capacity of the 4-inch diameter well is 10 gpm.

The application was flagged for hydrogeologic review due to Procino Plating (DE-0344) **Ex. 6 Personal Privacy (PP) / Ex.9 - Wells** **Ex. 6 Personal Privacy (PP) / Ex.9 - Wells**. Chromium is the primary contaminant of concern at DE-0344. Groundwater-flow direction at the site is generally toward the south, placing the proposed well in somewhat of a cross-gradient position. Per Rick Galloway of the DNREC-RS, there is no indication that contamination has moved to the southwest (in the direction of the proposed well).

Rick Galloway noted that the proposed well is in the "Blades Groundwater" investigation area, where per- and polyfluoroalkyl substances (PFAS), namely perfluorooctanoic acid (PFOA) and perfluorooctanesulfonate (PFOS), have been detected in groundwater from the surficial aquifer at concentrations exceeding the U.S. EPA Health Advisory of 70 parts per trillion (ppt). The latest results from this investigation are summarized in a June 2019 Final Site Inspection Report prepared by Weston Solutions. The existing well at **Ex. 6 Personal Privacy (PP)** **Ex. 6 Personal Privacy (PP) / Ex.9 - Wells** was sampled as part of this investigation, and the combined PFOA+PFOS concentration was 47.7 parts per trillion (ppt) on 2/27/18. However, **Ex. 6 Personal Privacy (PP) / Ex.9 - Wells** had a combined PFOA+PFOS concentration of 298 ppt based on a sample collected on 2/16/18.

Based on this joint review the well may be completed as proposed; site-specific condition #95 has been drafted in collaboration with Rick Galloway of the DNREC-RS to address PFAS concerns in this area.

Please contact me if you have any questions regarding this e-mail.

JK